

ABSTRACT

The present invention provides a microorganism-derived soluble coenzyme-binding glucose dehydrogenase which catalyzes a reaction for oxidizing glucose in the presence of an electron acceptor, has an activity to maltose as low as 5% or less, and is inhibited by 1,10-phenanthroline. The invention also provides a method for producing the coenzyme-binding glucose dehydrogenase, and a method and a reagent for measuring employing the coenzyme-binding glucose dehydrogenase. According to the invention, the coenzyme-binding glucose dehydrogenase can be applied to an industrial field, and a use becomes possible also in a material production or analysis including a method for measuring or eliminating glucose in a sample using the coenzyme-binding glucose dehydrogenase as well as a method for producing an organic compound. It became also possible to provide a glucose sensor capable of accurately measuring a blood sugar level. Therefore, it became possible to provide an enzyme having a high utility, such as an ability of being used for modifying a material in the fields of pharmaceuticals, clinical studies and food products.